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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/395,300	09/13/1999	EDWARD G. TIEDEMANN JR.	PA990073	5802

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

JAGANNATHAN, MELANIE

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 03/11/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

PA

Office Action Summary

Application No.

09/395,300

Applicant(s)

TIEDEMANN, EDWARD G.

Examiner

Melanie Jagannathan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-28 and 34-43 is/are allowed.
- 6) ☒ Claim(s) 1-20, 29-31 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20, 29, 31, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gutierrez US 6,285,669 in view of Takahashi et al. US 5,912,886.

The claimed method of overlaying a second CDMA system over a first CDMA system with a first signal transmitted over a first CDMA channelization, second signal transmitted over a second CDMA channelization, first and second signal share at least a portion of a common frequency spectrum and transmitted into a common coverage area and obtaining signal energies of signals is disclosed by CDMA communication system supporting underlay and overlay transmissions at least partially orthogonal to each other to lessen interference between underlay and overlay energies with underlay and overlay occupying common frequency spectrum and separate underlay and overlay base station units transmitting pilot signal as well information signals. CDMA system services overlay transmissions across a wider band. See Figures 2A and 2B, column 5, lines 64-67, column 6, lines 1-5, column 7, lines 40-59 and column 8.

Gutierrez discloses all of the limitations of the claims except for comparing phase or timing of first signal to second signal to generate an error indication and adjusting phase or timing in response to error indication. Takahashi et al. disclose a delay compensating circuit

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(Figure 5, element 305) calculating time difference of signal sent from radio base station to synchronization timing control station (element 303) and signal sent back from timing control station to radio base station and this delay time is used as a synchronization reference to correct formal frame timing and is used as the synchronization timing of radio communication channel of radio base station. See column 6, lines 26-67, column 7, and lines 1-9. At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify Gutierrez with timing synchronization method of Takahashi et al. One of ordinary skill in the art would be motivated to do this since maintaining strict timing between overlay and underlay systems improves performance. See column 1, lines 28-67, column 3, and lines 6-32.

3. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gutierrez. Gutierrez discloses all of the limitations of the claim except for a first antenna coupled to first and second base stations and to emit first and second signals. At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the base stations each equipped with an antenna of Gutierrez with an antenna coupled to both base stations. One of ordinary skill in the art would be motivated to do this for efficiency and improvement in performance.

Allowable Subject Matter

4. The prior art of record fails to disclose the determination of signal energies and power levels of the signals transmitted on first and second CDMA channelizations as in claims **21 and 43**. Furthermore, the prior art of record fails to disclose the determination of a level of loading

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based upon the power level of a signal as in claim **21, 34, and 43** and a timing error detection unit configured to compare timing of signals to determine a relative timing offset indication to be used to adjust a transmission timing of second signal as in claim **36**.

Additionally, all of the further limitations in claims **22-28, 35, 37-42** are allowable since the claims are dependent upon the independent claims.

Response to Arguments

5. Applicant's arguments with respect to claims 1-31, 33-43 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hall et al. US 6,208,871 disclose time adjustment to a wireless communication system.

Smith US 5,577,031 discloses wideband channelizer incorporating diversity switch.

Ozluturk US 5,960,347 discloses seamless handoff system and method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 703-305-8078.

The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 703-308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melanie Jagannathan
Patent Examiner
AU 2666

MJ

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Paul Drury
FRANK DRURY